

We Claim:

1. A device, comprising:

at least one printed circuit board having contact terminals with central blind openings formed therein; and

at least one semiconductor component having external contacts connected to said contact terminals on said printed circuit board, said external contacts of said semiconductor component protrude into said central blind openings and being in one of a force-locking engagement and a form-locking engagement with said contact terminals.

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2. The device according to claim 1, wherein said central blind openings have a top region and a bottom region having greater dimensions than said top region, and said external contacts of said semiconductor component are in said form-locking engagement with said contact terminals of said printed circuit board.

3. The device according to claim 2, wherein said central blind openings are slot shaped.

4. The device according to claim 1, wherein said central blind openings in said contact terminals are pillar shaped.

5. The device according to claim 1, wherein:

said contact terminals have a base area and a top surface; and

said central blind openings have a truncated cone shape with a base area disposed in a region of said base area of said contact terminals and a tip positioned level to said top surface of said contact terminals.

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6. The device according to claim 1, wherein:

said semiconductor component has a contact area; and

said external contacts of said semiconductor component have a rivet form in cross section, said rivet form having a rivet head connected to said contact area of said semiconductor component and a rivet tip protruding out from said semiconductor component.

7. The device according to claim 6, wherein said rivet tip of said rivet form has smaller dimensions than said central blind openings of said contact terminals of said printed circuit board, said rivet form having a foot region with greater dimensions than said central blind openings.

8. The device according to claim 1, wherein said external contacts of said semiconductor component have a frustoconical shape in cross section, said frustoconical shape having a tip with smaller dimensions than said central blind openings and a foot region with greater dimensions than said central blind openings.

9. The device according to claim 1, wherein said printed circuit board is a multi-layered ceramic printed circuit board.

10. The device according to claim 1, wherein said printed circuit board is a multi-layered plastic printed circuit board.

11. The device according to claim 1, wherein said printed circuit board has conductor tracks and under each of said central blind openings a via in contact with said conductor tracks.

12. The device according to claim 1, wherein said external contacts of said conductor component are formed from plastically deformable metal alloy.

13. The device according to claim 1, wherein said external contacts of said semiconductor component are formed from a silver solder alloy.

14. The device according to claim 1, wherein said external contacts of said semiconductor component are formed of a material that is softer than a material of said contact terminals of said printed circuit board.

15. The device according to claim 1, wherein said contact terminals are formed from a copper alloy.

16. A method of establishing an electromechanical connection between at least one semiconductor component and at least one printed circuit board, which comprises the steps of:

providing the semiconductor component with external contacts having a form selected from the group consisting of a rivet form and a frustoconical form;

providing the printed circuit board with contact terminals having central blind openings formed therein; and

aligning and bringing together the semiconductor component and the printed circuit board, so that the external contacts of the semiconductor component engage at least one of force-

lockingly in the central blind openings of the contact terminals of the printed circuit board with a pressing force being applied and form-lockingly in the central blind openings with plastic deformation of the external contacts occurring.

17. The method according to claim 16, which comprises filling an intermediate space disposed between the semiconductor component and the printed circuit board with a filler.

18. The method according to claim 17, which comprises using a two-component adhesive as the filler.

19. The method according to claim 18, wherein the external contacts of the semiconductor component are held by a micromechanical clamping effect in the central blind openings of the contact terminals of the printed circuit board during the filling step resulting in an adhesive bonding of the semiconductor component to the printed circuit board for forming the electromechanically connection.

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